crystallographically phase-pure α- or β-tricalcium phosphate ceramic with an interconnecting microporosity of 20-60% of its volume.

20. (Amended) The implant material of claim 17, wherein the calcium phosphate matrix degrades over time to release the MP52 protein or DNA encoding such MP52 protein in a controlled retarded manner.

21. (Twice Amended) A process for the production of an implant material according to claim 28, the process comprising applying the MP52 protein or DNA encoding such MP52 protein in and/or on the calcium phosphate matrix as a solution in a solvent such that a homogeneous distribution of the MP52 protein or DNA encoding such MP52 protein in and/or on the calcium phosphate matrix is achieved.

23. (Amended) The process of claim 21, wherein the MP52 protein or DNA encoding such MP52 protein is concentrated by *in situ* precipitation from the solvent in the calcium phosphate matrix by admixing a precipitating solvent.

26. (Amended) A method of use selected from the group consisting of a treatment of a bone defect, a sinus lift, a cyst filling in the jaw region, a bone fracture, a bone replacement, an application in cosmetic/plastic surgery and in the dental region, and immobilizing movable bone parts in a patient in need thereof, the method comprising implanting an implant material according to claim 28 into the patient.

28. An implant material suitable for cartilage and/or bone growth comprising a matrix material which is composed of a crystallographically phase-pure calcium phosphate and applied in and/or on said matrix a cartilage inducing and/or bone inducing MP52 protein or a DNA encoding such MP52 protein, wherein the MP52 protein is selected from the group consisting of

(a) a protein comprising amino acid 1 to 501, 28 to 501, 361-400 to 501, 381 to 501, 382 to 501, 400 to 500 of SEQ. ID. No. 1,

(b) a protein according to (a) which is a homodimer, and

(c) a protein according to (b) in combination with a dimer of another protein of the TGF-β superfamily.

REMARKS

The Office Action dated September 7, 2001 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

The Office rejects claims 28-29 under 35 USC §112, first paragraph, as assertedly containing subject matter not sufficiently described in the specification. Claims 17-29 are also rejected under 35 USC §112, first paragraph, because the specification is asserted to not reasonably enable the full scope of the claimed invention. The Office Action asserts that the description would not sufficiently indicate, which fragments and parts exhibit the cartilage and bone inducing activity of